DOCUMENT RESUME

ED 172 893 JC 790 443

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TITLE Annual Report of the Developmental Mathematics Curriculum Committee of the American Mathematical Association of Two Year Colleges: Report of Subcommittee Activity for 1977-1978.
INSTITUTION American Mathematical Association of Two-Year Colleges.
PUB DATE Dec 78
NOTE 26p.

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Basic Skills; College Mathematics; Community Colleges; Curriculum Development; Curriculum Planning; Electromechanical Aids; Item Analysis; *Junior Colleges; *Mathematics Education; *Mathematics Teachers; Program Evaluation; *Remedial Mathematics; Remedial Teachers; *Teacher Education; Teacher Qualifications
IDENTIFIERS *Hand Held Calculators

ABSTRACT

The annual reports of five subcommittees of the American Mathematical Association of Two-Year Colleges' Developmental Mathematics Curriculum Committee (AMATYC-DMC) are preceded by a statement of goals for a remedial mathematics curriculum. The Hand-Held Calculator Subcommittee reported the results of a 12-item questionnaire distributed to college mathematics instructors to determine teacher opinion and school policy regarding student use of hand-held calculators, how their use should be taught, and how they affect students' interest and skill in math. The Testing Subcommittee report cites a recently completed analysis of a booklet of categorized multiple-choice test questions for instructor use. The Teacher Qualification Subcommittee surveyed existing requirements for two-year college employment of developmental mathematics teachers. To help develop programs and standards for curriculum at the two-year college level, the Minimum Mathematics Competency Subcommittee surveyed AMATYC members to ascertain which study topics they would require for graduation. The goals of the Evaluation Subcommittee are to identify similarities among existing programs and develop an evaluative tool to determine relative success of various developmental programs. Survey forms and tabulations are included for the reports on hand-held calculators, teacher requirements, and minimal competency. (DR)

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ANNUAL REPORT

OF THE

DEVELOPMENTAL MATHEMATICS CURRICULUM COMMITTEE

OF THE

AMERICAN MATHEMATICAL ASSOCIATION OF TWO YEAR COLLEGES

Report of Subcommittee Activity for 1977-1978

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December 1978

JC 790 443

AMATYC-DMC COMMITTEE

AMERICAN MATHEMATICAL ASSOCIATION OF TWO YEAR COLLEGES

DEVELOPMENTAL MATHEMATICS CURRICULUM COMMITTEE

Annual DMC Report

December 1978

Report of Subcommittee Activity for 1977-1978

1. Report of Hand Held Calculator Subcommittee
   Lowell Salmond, Utah Technical College
   Salt Lake City, Utah

2. Report of Subcommittee on Testing
   Ann Dice, Harper College
   Palatine, Illinois

3. Report of Teacher Qualification Subcommittee
   Dr. Patricia Dyer, Broward Community College
   Pompano Beach, Florida

4. Report of Minimial Competency Subcommittee
   William Drezdzon, Oakton Community College
   Morton Grove, Illinois

5. Report of Evaluation Model Subcommittee
   Don Kern, Austin Peay University
   Clarkesville, Tennessee

DMC Chairpersons: Amber Steinmetz, Three Rivers Community College
Poplar Bluff, Missouri 63901

Dr. James Baldwin, Nassau Community College
Garden City, New York 11530

DMC Secretary: Alice Berridge, Nassau Community College
Garden City, New York 11530

INTRODUCTION

The DMC Committee, established in 1974 as one of the first standing AMATYC Committees, is comprised of AMATYC members who are interested in the topic of developmental mathematics. Developmental math is roughly defined as remedial math. This includes arithmetic and some topics in algebra and geometry.

The DMC Five Year Plan was developed early in 1977 and reads as follows:

1. Development of a policy on the proper and best use of hand-held calculators in DMC programs.

2. Compile an item pool of test questions. From the pool, questions can be selected for use as a placement test as well as for performance rating of students in DMC. A retrieval system will be developed to generate tests randomly.

3. Organizations of workshops for upgrading DMC, including testing and evaluation workshops.

4. Publication of a DMC Newsletter to encourage communications.

5. Design guidelines and recommendations to be presented to universities for the training of future two-year college mathematics teachers in the area of remediation.

6. Design of a general evaluation model for DMC.

7. Establishment of recommended minimal competency requirements in mathematics for a two-year college.

8. Preparation of grant proposals to help implement the objectives of the DMC Committee.

9. Establishment of a liaison committee to maintain contact and communication with DMC units of other mathematics or educational organizations.

The work accomplished in Committee this year has brought us closer to these goals.

Committee effort for next year will concentrate on this plan and on the Committee's broad objectives. These broad objectives are:

1. To encourage communication between the AMATYC DMC Committee, State Associations and other interest groups.

2. To develop awareness and understanding of the need for a workable DMC program that can be used in a member institution.

3. To provide opportunities for upgrading DMC methodology.

REPORT OF HAND-HELD CALCULATOR COMMITTEE

Lowell Salmond, October 1978
Utah Technical College at Salt Lake
4600 S. Redwood Rd.
Salt Lake City, UT 84107

During this past year the Hand-Held Calculator Committee developed a 12 item questionnaire and distributed it to 310 instructors who had expressed an interest in the work of DMC. The 109 responses (response rate 36 1/3%) were tallied and analyzed by the committee. The results as well as the questionnaire, are displayed at the close of this report along with the statistical analysis.

One interesting outcome of the study was the finding that hand-held calculator use would best be taught as need arises in conjunction with a specific learning experience during the course or on students' own time. Most respondents did not believe a separate course was necessary or desired.

Two questions (5 and 6) should lead to further study. The fifth question asked, "How does the HHC affect the students' interest in math?" The majority (58%) felt the calculator did increase students interest. Perhaps a formal study could be developed to test this hypothesis.

The sixth question asked, "Does the computational skill of the student change with the use of HHC?" There was no clear perception as to what effect HHC had on computational skill. Once again a study could be developed to analyze this question.

Some of the responses that came from the questionnaire were:

A. Most schools do not have a policy on the hand-held calculator in math classes. Those who do, leave it up to the instructor.

B. A majority thought that the hand-held calculator should be used in developmental algebra and other higher math classes.

C. The hand-held calculator should be used in classroom activities, in homework preparation, as a checking tool, and on tests.

D. The hand-held calculator does help the student to solve more problems in all areas.

E. The hand-held calculator does not hinder the student's desire to master basic concepts.

F. Most schools do not furnish hand-held calculators to their students.

G. There was no particular brand of hand-held calculators that the teacher thought was best for the classroom. Most of the comments were let the students decide for themselves.

QUESTIONNAIRE ON HAND-HELD CALCULATORS

RESULTS
Total sent 310
Total recd 109

	Yes	No	No Comment
1. Does your school have a policy on HHC in its math classes?	32	27	
a. If "Yes", what is your policy?			

_____

_____

_____

2. In what courses are students allowed to use the HHC?			
a. Developmental Mathematics	31	50	28
b. Developmental Algebra	47	39	23
c. Geometry	29	25	55
d. Other (Course Name)_____	78	2	29
3. In what areas of the above courses are students allowed to use the HHC?			
a. Classroom activities	96	4	10
b. Homework Preparation	96	4	9
c. As a checking tool	95	4	10
d. Tests	80	8	21
4. How should the use of the HHC be taught?			
a. As a regular course	33	40	36
b. At the appropriate time during class	76	14	19
c. Student learns on his own	60	14	35

5. How does the use of the HHC affect the students interest in math? (Please check one)

a. Creates more interest 64

b. Creates less interest 0

c. Has no effect on student's interest 33

12 No Comment

6. Does the computational skill of the student change with the use of the HHC? (Please check one)

a. Increases 35

b. Decreases 16

c. Is not affected 36

22 No Comment

7. Does the HHC help the student to solve more

a. Arithmetic problems	79	17	13
b. Algebra problems	50	36	23
c. Trig. problems	93	7	9
d. Others _____	48	3	58

8. Does the HHC hinder the student's desire to master basic concepts?	32	60	17
9. Does your school furnish the students with a HHC for classroom activities?	30	73	6

10. Which functions do you feel the HHC should have? (Please circle those functions that should be on the HHC.)

+, -, x, $\frac{a}{b}$, %, $\sqrt{x}$, x^2, $1/x$, y^x

$\sqrt[x]{y}$, sin, cos, tan, $\sin^{-1}$, $\cos^{-1}$

$\tan^{-1}$, 10^x, log x, e^x, in x, x!y

$\bar{x}$, s, P, R, Radian, programmable

11. Can you recommend one HHC for use in the classroom?	40	56	13

a. If "Yes", which one?_____

12. Feel free to enlarge on your answers to any of the above questions. Please include any other pertinent information on the use of the HHC at your institution.

Please use the space provided below for comments on question 12.

Mail to:
Mr. Lowell Slamond, Chairperson
HHC Committee of AMATYC
Utah Technical College at Salt Lake
4600 South Redwood Road
Salt Lake City, Utah 84107

NAME

SCHOOL AND ADDRESS

QUESTIONNAIRE ON HAND-HELD CALCULATORS

SUMMARY

Total Sent 310
Total Received 109

	YES	NO	NO COMMENT
1.	32 29%	77 71%	0 0%
2a.	31 28%	50 46%	28 26%
2b.	47 43%	39 36%	23 21%
2c.	29 27%	25 23%	55 50%
2d.	78 72%	2 2%	29 27%
3a.	95 87%	4 4%	10 9%
3b.	96 88%	4 4%	9 8%
3c.	95 87%	4 4%	10 9%
3d.	80 73%	8 7	21 19%
4a.	33 30%	40 37%	36 33%
4b.	76 70%	14 13%	19 17%
4c.	60 55%	14 13%	35 32%
7a.	79 72%	17 16%	13 12%
7b.	50 46%	36 33%	23 21%
7c.	93 85%	7 6%	9 8%
7d.	48 44%	3 3%	58 53%
8.	32 29%	60 55%	17 16%
9.	30 28%	73 67%	6 6%
11.	40 37%	56 51%	13 12%

	a	b	c	NO COMMENT
5.	64 59%	0 0%	33 30	12 11%
6.	35 32%	16 15%	36 33%	22 20%

STATISTICAL REPORT

Statistically the questions are as follows (using chi square):

No. 1 is no to .01 level with 2 degrees of freedom.
No. 2a is no to .01 level with 6 degrees of freedom.
No. 2b is yes to .01 level with 6 degrees of freedom.
No. 2c is no comment to .01 level with 6 degrees of freedom.
No. 2d is yes to .01 level with 6 degrees of freedom.
No. 3a is yes to .1 level with 6 degrees of freedom.
No. 3b is yes to .1 level with 6 degrees of freedom.
No. 3c is yes to .1 level with 6 degrees of freedom.
No. 3d is yes to .1 level with 6 degrees of freedom.
No. 4a is no to .01 level with 4 degrees of freedom.
No. 4b is yes to .01 level with 4 degrees of freedom.
No. 4c is yes to .01 level with 4 degrees of freedom.
No. 7a is yes to .01 level with 6 degrees of freedom.
No. 7b is yes to .01 level with 6 degrees of freedom.
No. 7c is yes to .01 level with 6 degrees of freedom.
No. 7d is no comment to .01 level with 6 degrees of freedom.
No. 8 is no to .01 level with 2 degrees of freedom.
No. 9 is no to .01 level with 2 degrees of freedom.
No. 11 is no to .01 level with 2 degrees of freedom.

No. 5- the hand-held calculator did affect the students interest in math to the level .01 with 3 degrees of freedom.

No. 6- no decisive answer

ANNUAL REPORT OF DMC SUBCOMMITTEE ON TESTING

Ann Dice
EMPS
Harper College
Palatire, IL 60067

October 1978

At the Atlanta Convention last year, the subcommittee had available a booklet of categorized test questions from placement/diagnostic tests gathered across the United States. Many exams were received in '77-'78 and their questions were categorized and filed.

The Atlanta Booklet did not contain the questions that were not multiple choice. Ms. Jenness and I have since converted the non-multiple choice questions to multiple choice and have interfiled these questions.

Each committee member was requested to test with students about ninety five questions in the Atlanta Test Question Booklet. The results of this item analysis are available on request.

The item analysis is, of course, only of interest to those who have the original booklet. No more booklets are available at this time; however, the committee's present goal is to develop a card file or another booklet of tested, and in several cases corrected, questions.

ANNUAL REPORT OF TEACHER QUALIFICATION SUBCOMMITTEE

Dr. Patricia Dyer October 1978
Broward Community College - North Campus
1000 Coconut Creek Blvd.
Pompano Beach, FL 33063

This subcommittee developed and distributed two questionnaires in the past year. One is a survey of existing requirements for employment of developmental teachers in two-year colleges, and the other is a survey of colleges and universities involved in teacher training.

SURVEY OF DMC MEMBERS ON THE EMPLOYMENT OF DEVELOPMENTAL MATHEMATICS TWO-YEAR COLLEGE TEACHERS

The survey on employment of DMC teachers in two-year colleges was mailed to the entire membership of AMATYC. Approximately 40 percent of the membership responded. After sorting out the duplication of responses, there were 160 colleges and/or campuses included at the time of this summary of results (included on the attached survey forms).

The summary of the responses to the questionnaire exhibits a number of interesting results:

- Almost 94% of the schools responding have some form of developmental mathematics curriculum (DMC).

- In almost 73% of these, DMC is administered by the mathematics department.

Some form of Developmental Studies department exists in more than 21%.

- Only 9 responding institutions indicated they required more than one qualification in the list for employment. In most of these cases, the qualifications were degree and experience of some kind.

- In 68% of the returns Required and Preferred Qualifications differed. Under Preferred, 78.7% indicated a Masters degree in mathematics. Many of these also indicated a preference for (any) teaching experience and/or training or courses for teachers of DMC.

- In 78% of the responses, no difference was indicated in the requirements for employment of DMC teachers and mathematics instructors in general.

- In 86% of the responses, the state had no specific requirements for DMC teachers different from two-year college mathematics instructors generally.

SURVEY OF DMC MEMBERS ON THE
EMPLOYMENT OF DEVELOPMENTAL MATHEMATICS
TWO-YEAR COLLEGE TEACHERS

Name of School _____ Two - Year College Other Specify _____

In responding to these questions, check the option or options which are suitable for your institutions.

%	N		
		1.	How many full - time students attend your college during a regular term, semester or quarter?
15.0	24	a.	0 - 1000
30.6	49	b.	1001 -3000
19.4	31	c.	3001 -5000
35.0	56	d.	over 5000
		2.	Does your school have DMC?
93.8	150	a.	yes
6.2	10	b.	no

If your response to #2 is yes, please complete the remainder of this survey. If no, turn to the last page.

%	N		
		3.	What department administers DMC?
70.7	106	a.	Mathematics Department
2.0	3	b.	Mathematics with input from collegewide committee
21.3	32	c.	Developmental Studies
3.3	5	d.	Other, Specify _____.

All the following questions refer to teachers of DMC in your college.

4. Below is a list of possible qualifications for two year college teachers of DMC.

If the qualification is required in your college, please place a check in column A.
If the qualification is preferred/recommended, please place a check in column B.

A (Required)		B (Preferred)		
%	N	%	N	
9.3	14	2.0	3	BA, BS any subject
18.7	28	10.0	15	BA, BS mathematics
8.0	12	4.7	7	MA/MS any subject
54.7	82	78.7	118	MA/MS mathematics
0.7	1	5.3	8	Other degree - specify below
0.7	1	9.3	14	Internship in Public Schools (k-12)
	0	6.7	10	Internship in College
2.0	3	30.7	46	Experience teaching (k-12)
1.3	2	32.7	49	Experience teaching college

2.0	3	42.7	64	Experience teaching two-year college
1.3	2	6.7	10	Other experience - specify below
2.0	3	12.7	19	Special Courses in Teaching DMC
0.7	1	14.0	21	Special Training for teachers of DMC
3.3	5	2.0	3	Less than above

Specify responses: _____

_____

_____

%	N		
		5.	Does your college have different qualifications required for teachers of DMC from teachers in the mathematics department in general?
8.0	117	a.	no
8.0	27	b.	yes
0.7	1	c.	other

If yes, how do these differ?

6. Does your college have different preferred/recommended qualifications for teachers of DMC from teachers in the mathematics department in general?

5.3	98	a.	no
6.7	40	b.	yes
0.7	1	c.	other

If yes, how do these differ?

7. Does your state have required qualifications for teachers of DMC in two-year colleges?

6.0	129	a.	no
6.7	10	b.	yes
2.0	3	c.	other

8. Does your state have different qualifications required for teachers of DMC from teachers in mathematics departments in general?

8.7	133	a.	no
3.3	5	b.	yes
2.7	4	c.	other

If yes, how do these differ?

%	N		
		9.	Are the required qualifications for teachers of DMC in your college specified by any agency/ organization other than your school or the state.
0.7	1	a.	yes
1.3	77	b.	no
0.7	1	c.	don't know
6.7	70	d.	no answer
0.7	1	e.	other

Specify State Coord. Bd. of Education

Survey of Colleges and Universities Preparation of Two-Year College Teachers of DMC

The questionnaire for this survey was mailed to 1250 colleges and universities listed in the Tabular Data volume of the College Blue Book. It went to all colleges/universities listed except two-year and special schools such as medical, law, etc. Of these, 423 responded (33.8%). The summary of responses is recorded on the enclosed survey form.

Of the 423 responses, 262 institutions offered a Masters degree or higher. Of these 262, 113 indicated offerings for two-year college teachers. Only 43 of the 113 indicated something for DMC teachers specifically. Many respondents checked more than one item offered -e.g., courses and special programs.

The most often checked item on the survey from institutions with DMC offerings was courses. Four surveys indicated degrees offered for DMC teachers, but on close inspection these were degrees for the two-year college teacher in general, without a DMC component.

Of the 262 institutions noted above, several returned materials about their schools and their offerings.

The results of this survey suggest that relatively few colleges and universities are specializing in DMC at this time. Many universities expressed interest in the results of the survey. This may be an area which universities will examine more closely considering the recent publicity about and efforts toward a "return to basics" and to "competence" in school systems.

SUBCOMMITTEE TASKS FOR THE FUTURE

The long-range goal for this subcommittee is the establishment of recommended qualifications for two-year college teachers of DMC. The surveys reported above were steps toward that goal. During this year, 1978-79, this subcommittee should plan for "debates" on the necessary qualifications for DMC teachers. These discussions can be initiated in many places - among two-year-college faculties, among university faculties, at state mathematics association meetings, and at the national meeting of AMATYC, October, 1979. One specific objective of this subcommittee is to schedule and promote such discussions at the San Diego Meeting.

SURVEY OF
COLLEGES AND UNIVERSITIES
PREPARATION OF TWO-YEAR COLLEGE TEACHERS OF DMC

1. Name of Institution _____

In completing this questionnaire, check ____ the option or options which are suitable for your institution.

2. Size of institution:

____ a. 0-1000
____ b. 1001-3000
____ c. 3001-5000
____ d. over 5000

3. Degrees granted (mark as many as apply)

		N	%
____	a. Associate		
____	b. Bachelor's	161	38.1
____	c. Master's		
____	d. Doctorate	262	61.9
____	e. Other. Specify _____		

If your institution grants the Master's degree, please answer questions 4 and 5.

At the Master's level,

4. Does your institution provide for those teaching or planning to teach in the two-year college, specific (mark as many as apply):

%	N		
31.7	83	a.	Courses
8.8	23	b.	Special programs
22.9	60	c.	Degrees
5.3	14	d.	Other. Specify _____
56.5	148	e.	Nothing

5. If your answer to #4 included any of responses a. through d., respond to this question. Does your institution provide for two-year college teachers of mathematics currently teaching or planning to teach developmental mathematics courses/currriculum (DMC).

%	N		
13.4	35	a.	Courses
1.4	1	b.	Special programs
1.5	4	c.	Specific degrees
2.7	7	d.	Other. Specify _____
83.6	219	e.	Nothing.
0.4	1	f.	Nothing now - in planning stage.

If your institution grants the doctorate, answer questions 6-8.

6. Does your institution have a doctoral program for two-year college teachers?

____ a. yes
____ b. no

7. If your response to #6 is yes, is the doctorate granted for this specialty the

____ a. Ph.D in discipline area
____ b. Ph.D in education
____ c. Ed.D
____ d. D.A. in discipline area
____ e. Other. Specify _____.

8. If your response to #6 is yes, does your institution have a special program for teachers of DMC?

____ a. yes
____ b. no > None

If any of your responses in question 4 through 8 indicates you provide training or degree(s) for two-year college teachers, complete the following section with respect to qualifications set up by your institution:

9. What degree is recommended for two-year college teachers:

____ a. Bachelor's
____ b. Master's in discipline area
____ c. Master's in teaching or education
____ d. Ph.D in discipline area
____ e. Ed.D
____ f. D.A. in discipline area
____ g. Other. Specify _____.

10. What is program content recommended for two-year college teachers. Mark all that apply:

____ a. Graduate course work in discipline. ____Semester or quarter hours.
____ b. Undergraduate course work in education. ____Semester or quarter hours.
____ c. Graduate course work in education.____ Semester or quarter hours.
____ d. Dissertation. Research in discipline.
____ e. Dissertation. Discipline survey.
____ f. Dissertation. Research in education.
____ g. Internship in two-year college during program supervised by your institution.

REPORT OF MINIMAL MATHEMATICS COMPETENCY SUBCOMMITTEE

William Drezdzon December 1978
Oakton Community College
Morton Grove, IL 60053

Students are graduating in ever increasing numbers from two-year colleges with various kinds of degrees and certificates. It has been assumed that as a result of the increasing proportion of the college graduates in the country the educational level of the population has also increased. Yet recent evidence indicates the contrary; larger proportions of our society do not have competency in the basic skills of reading, writing and mathematics. The increasing concern by the public as to the quality of mathematics competency of college graduates has been expressed in the news media as well as in professional journals. These concerns include the inability of college graduates to perform simple arithmetic calculations, understand quantification in measurement, perform simple calculations with percents needed for loans and credit buying as well as the calculations for a paycheck.

In order to fully identify and develop a program for minimal mathematics competency at the two-year college level, this subcommittee was established in April 1977. At the Atlanta Convention membership was enlarged to 45 members. The Convention provided opportunity for dialogue about these major issues. As an initial step it was agreed that a national survey would be developed to help in defining the minimal competency levels for two-year graduates. At that time subcommittee members established a goal plan which forecasts completion of committee tasks by 1981. Later, subcommittee members communicated by mail as to the form of the questionnaire and also about the underlying issues; articles on the subject were exchanged. In April 1978 the questionnaire was mailed to 630 persons, either AMATYC members or AMATYC referrals. Results are tabulated on the sample survey form included in this report.

Subcommittee members agree that two-year colleges have three major categories of students needing mathematical skills: Liberal Arts, Vocational and Technical, and also Science, Engineering and Mathematics. Students in each of these three catagories have needs that are different and just one set of minimal competencies is not possible. There are two types of students in Liberal Arts programs; those who take from three to six hours in basic mathematics and those who need more than two mathematics courses such as education majors or business majors. Vocational and Technical programs include transfer students who expect to earn an associate degree or those in a certificate program. In most of these latter programs the mathematics taught is intrinsic to the specific job skills. Students in Science, Enginneering and Mathematics Programs take an ample number of credits in traditional mathematics skills courses.

It may be that most of the above students, because of the nature of their curriculum area concentration, could pass a simple examination on basic mathematical skills. It is debatable whether all students would have enough knowledge of geometry, tables, charts alertness to reasonable results and predictions, and computer literacy to be mathematically knowledgeable members of society. It is highly questionable whether students, and especially those in programs with a high concentration of mathematics skills courses, would be able to answer questions relating to balancing their checkbooks or filing their own income tax forms, that is questions relating to the social aspects of consumer mathematics.

Subcommittee members have agreed that the examination that they will develop will also measure those mathematical abilities that are responsible for life and job success.

This December a revised questionnaire was sent to about 50 of the previous respondents. The new questionnaire includes topics on the matric system, basic statistics, reading tables, hand-held calculators and consumer math. Respondents were asked to categorize the revised list of topics into:

Level One - Computational skills needed in the broad curriculum areas - Liberal Arts, Vocational and Technical Programs and Science, Engineering and Mathematics Programs.

Level Two - Computational skills needed for life experience.

Rank order as to necessity will be established for each topic within the levels. After analysis of the breakdown of competency topics for the three curriculum areas the subcommittee will begin drafting the AMATYC-DMC Mathematics Competence Examination. Sample exams will be administered and evaluated under a comprehensive evaluation schedule for a two-year period. It is expected that by 1981 finalized exam versions will be available for use by member colleges as a degree or certificate requirement.

Dear Colleague:

At the 1977 annual AMATYC Convention in Atlanta, subcommittee of Developmental Math Committee was formed to analyze minimal competency in mathematics for two-year college graduates. This survey will begin the investigation of this aspect of mathematics colleges.

Name of your school _____

Address of your school _____

What is the percent of students majoring in the following broad areas?

Percent	Liberal Arts	Transfer Vocational Programs	Terminal Vocational Programs
0-10	14	52	13
11-20	16	30	22
21-30	24	24	24
31-40	21	14	32
41-50	27	4	22
51-60	20	3	9
61-70	12	1	5
71-80	12	1	7
81-90	3	0	4
91-100	0	0	7

1. Do you have a minimal competency requirement at your school?

   a. yes b. no (circle one)

   If yes, describe the method used. _____

   _____

   _____

   Is this method satisfactory?

RESPONSES
207 Total

a. yes-51
b. no-156

a. yes-12
b. no-7

2. Do you believe there should be a minimal mathematics competency requirement for two-year graduates at your college?

   a. yes b. no (circle one)

a. yes-177
b. no-37
c. undecided-4

If yes, what would be the best measure of this competency?

a. test b. project c. Grade in specified course
d. other (please specify)_____

(circle one)

a. test-116
b. project-4
c. grade-74
d. combination a&c-35

3. Do you believe there should be a national minimal mathematics competency standard endorsed by AMATYC - DMC?

a. yes b. no (circle one)

a. yes-166
b. no-46
c. Undecided-3

4. If you were to set a minimal mathematics competency requirement at your school, which of the following topics of study would you require your students to know in order to graduate?

The survery topics have been re-ranked according to number of responses:

1.	Whole Numbers - Basic Operations	203
2.	Decimals	203
3.	Percent	201
4.	Fractions - Multiplication and Division	197
5.	Fractions - Addition and Subtraction	196
6.	Length, area	189
7.	Units of Measurement	185
8.	Ratios	182
9.	Proportions	179
10.	Volume, mass	167
11.	How to read a ruler	165
12.	Estimation	157
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EVALUATION SUBCOMMITTEE

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Nearly half of the schools which received the first DMC Evaluation Questionnaire have responded to date. Considering the length and breadth of the form this was an excellent beginning. Based on this effort and suggestions by the respondents, a second questionnaire will be sent to two hundred schools. This will be a sizeable undertaking. Volunteers are needed to assist Dr. Kern in refining the questionnaire as well as in evaluating the results. If you can help, write him.

In his report at Houston, Dr. Kern demonstrated the complexity of the evaluation process. His initial inquiries show that there were as many different criteria used for program evaluation as there were different programs. The identification of similarities among programs and the development of an evaluative tool for determining the relative success of developmental math courses and programs is a sizeable goal of this committee.

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